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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,938	10/31/2001	William B. Connors	10007153-1	4722

7590

01/13/2003

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EXAMINER

NGUYEN, JUDY

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,938

Applicant(s)

CONNORS ET AL.

Examiner

Judy Nguyen

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With respect to claim 1, the specification including drawings does not describe how at least one **power via** formed within the circuit as an interface between the first metal layer and the second metal layer and as a separation barrier between the resistors and the power bus as recited in the claim.

First, "via" or "vias" is known in the art as "opening" or "openings". The power vias (140, 142, 144) do not illustrate as openings. Hence, it is not clear what "via/vias" supposed to be.

Second, the specification recites, "the second metal layer is conformed with plural vias that form an interface between the first metal layer and the second metal layer" (page 2, lines 28+). This recitation specifies that the plural vias form an interface not at least one power via as recited in the claim. In addition, the cross-section of Figure 4 illustrating the first metal layer 402 and the second metal layer 404. The only thing that appears to be interfaced between the first metal layer 402 and the second metal layer 404 is the substrate 409. Although the specification indicates that the vias 406 form an interface between first and second layers 402, 404, vias 406 are not disclosed as power via(s) as suggested by the claim. Furthermore, the vias 406 appears like a projection of barrier 375. The vias 406 or the projection illustrates at the top of the first and second metal layers 402, 404. Hence, it is unclear how this projection-like-structure or the vias 406 can be an interface between the first and second metal layers 402, 404.

Third, the specification indicates that a separation barrier is a portion 408 of metal 407 of the second layer 404 (page 8, first paragraph). Hence, it is unclear how at least one power via 140 can be formed as a separation barrier between the resistors and the power bus as recited in the claim while the separation barrier 408 is part of the second layer 404, not the power via 140.

With respect to the methods claims 10-20, the specification does not disclose any processes or steps as recited in the claims. In addition, most recited steps

set forth desired results rather than positive steps that one of ordinary skilled in the art can perform. For instance, protecting the power bus from ink exposure is a problem of which applicant wanted to solve (see BACKGROUND OF THE INVENTION). The step to perform to accomplish the desired result as recited appears to be known only by applicant. One skilled in the art would not know what step to perform to protect the power bus from ink exposure as claimed.

With respect to other claims, it is noted that the specification is not clearly described the invention. Particularly, the inter-relationship between Figure 1 and Figure 4 is vague and ambiguous. The claims appear to randomly include limitations in Figures 1 and 4. However, since the inter-relationship between these two Figures is not clear. One skilled in the art would not know how to make and/or use the claimed invention. It is noted that the only element that is common between Figures 1 and 4 is the resistor 112. It is unclear how the resistor 112 in Figure 1 can also be in Figure 4 while there is no inter-relationship between the rest of the elements of Figures 1 and 4.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:


The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In view of the 112, First Paragraph rejection above, the product claims do not appear to reflect the final product as illustrated. Therefore, the claims are completely ambiguous because it is unclear whether applicant is claiming a final product or the intermediate product. With respect to the method claims, these claims are ambiguous because they mostly recite results as opposed to positive steps for getting to such recited results. Particularly, the specification does not disclose how to get to such result as claimed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy Nguyen whose telephone number is (703) 305-7062. The examiner can normally be reached on Monday - Friday.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Judy Nguyen
Primary Examiner
January 9, 2003